

**Figure 1: Prior art - Typical Active Matrix Display**

Controller IC 10

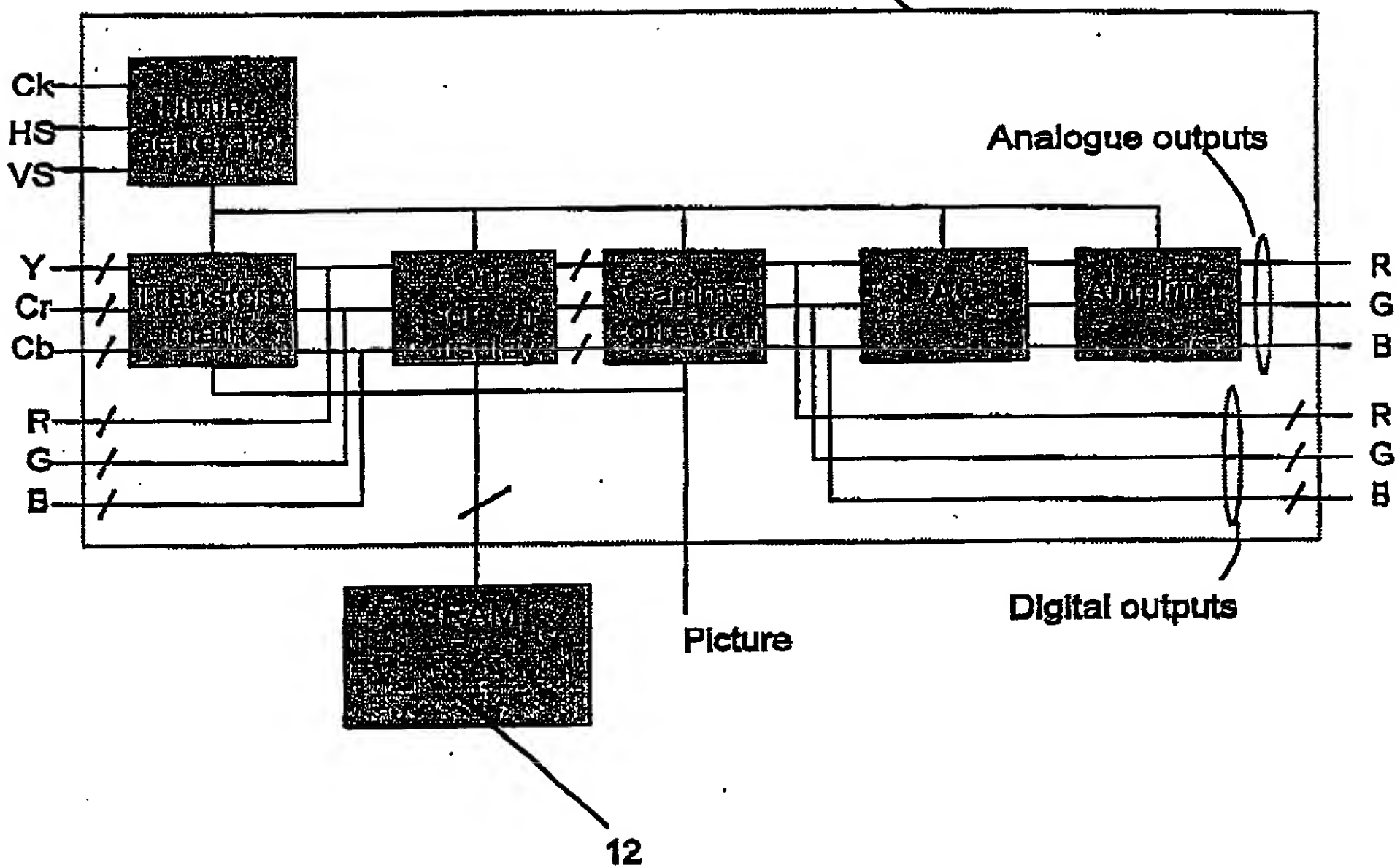


Figure 2 prior art - typical active matrix display controller IC

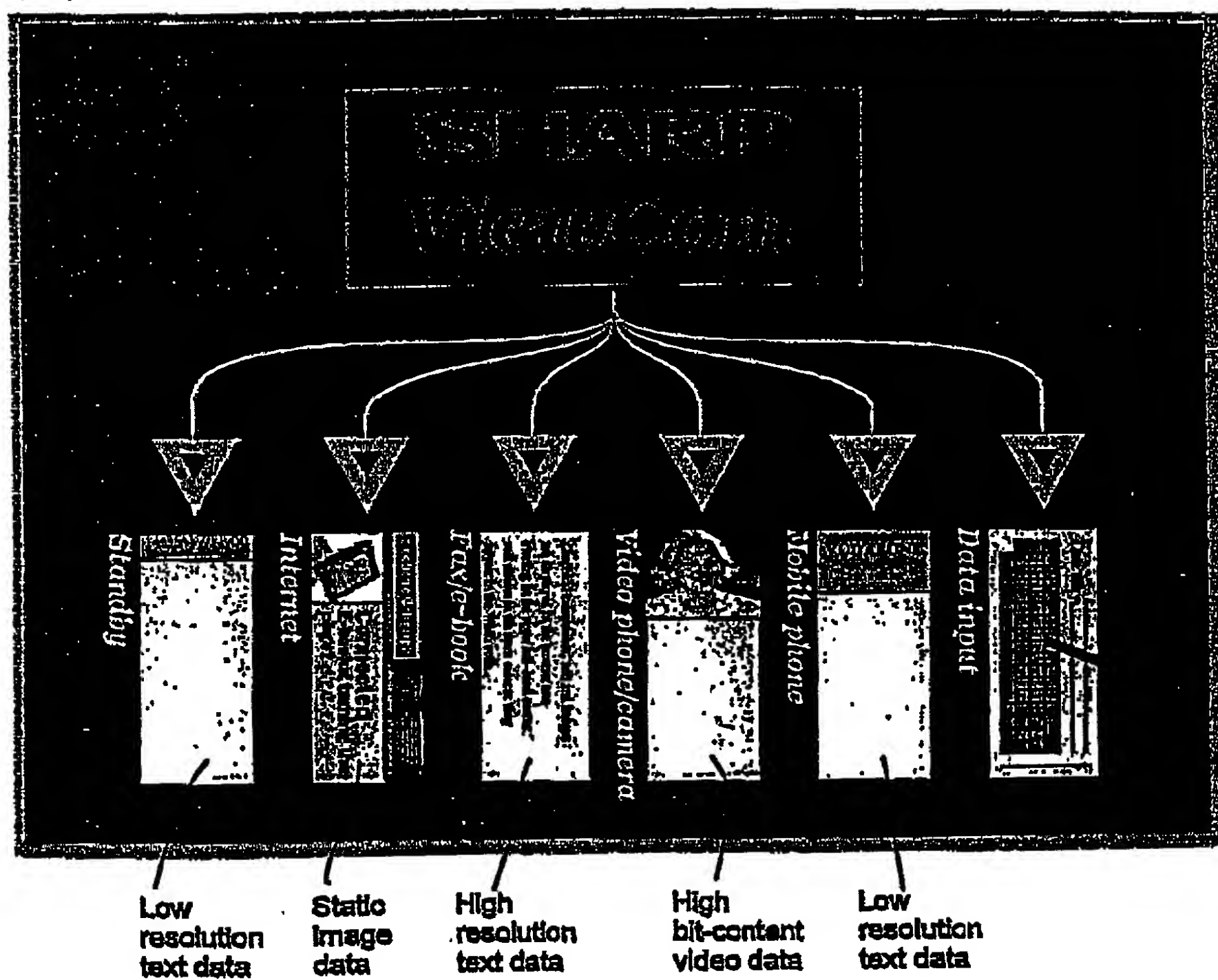


Figure 3: Conceptual application of multi-format Image data

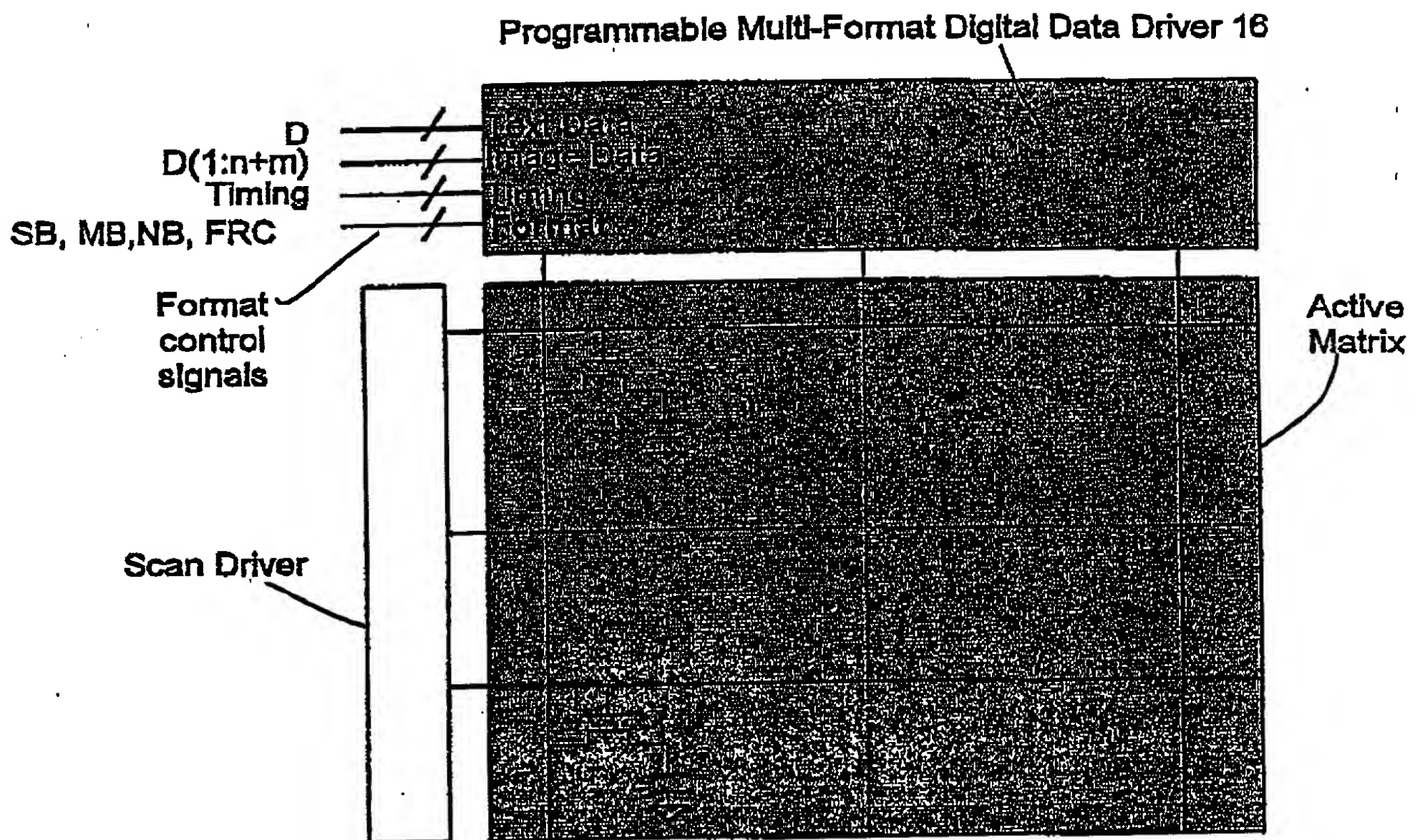


Figure 4: Multi-format digital data driver

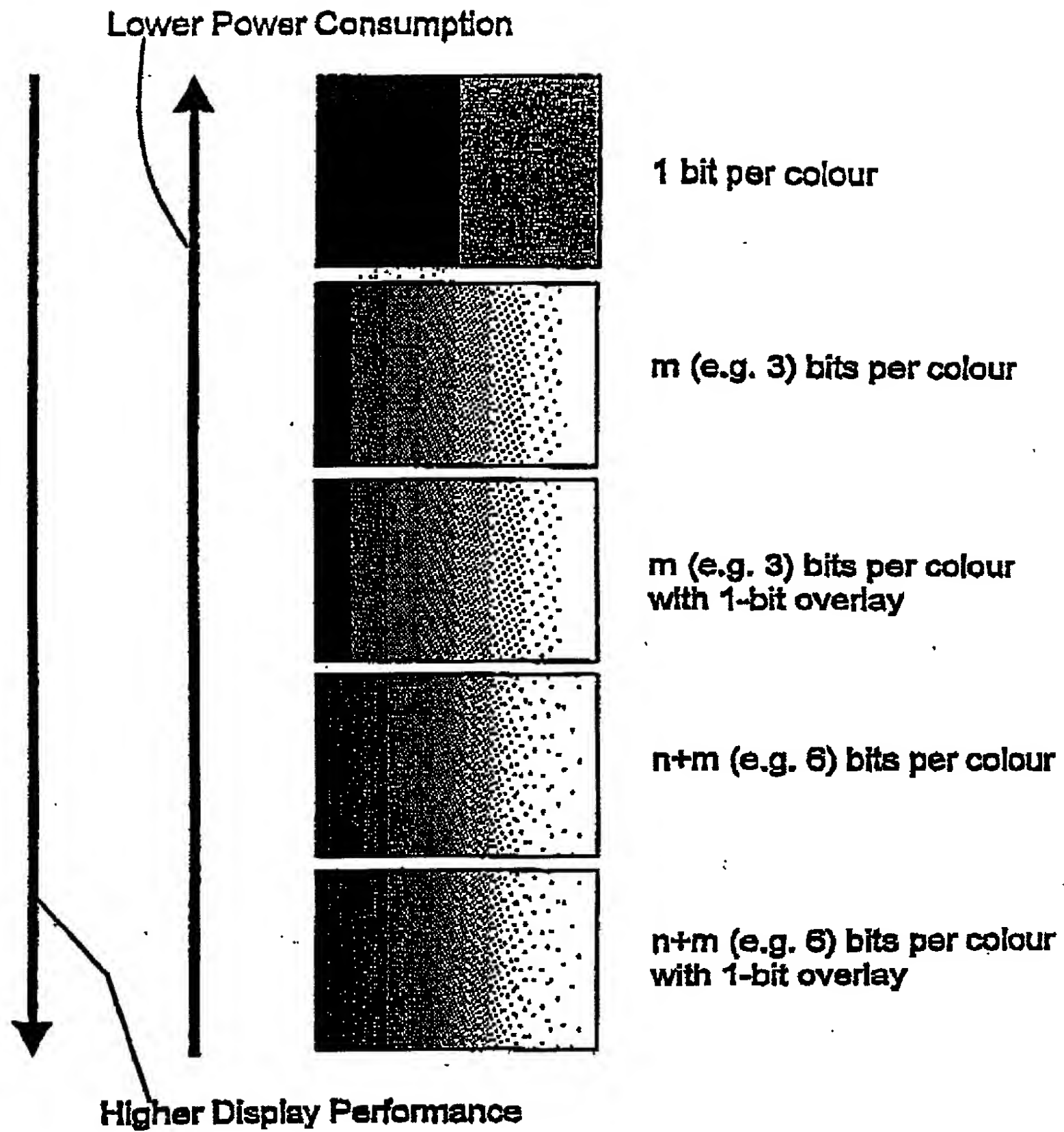


Figure 5: The trade-off between power consumption and Image quality

Format Control			
NB	MB	SB	Driver Format
0	0	1	1-bit per colour
0	1	0	m bits per colour
1	1	0	n+m bits per colour
0	1	1	m bits per colour with 1-bit overlay
1	1	1	n+m bits per colour with 1-bit overlay

Figure 6: Table showing three Format Control Signals and selected format

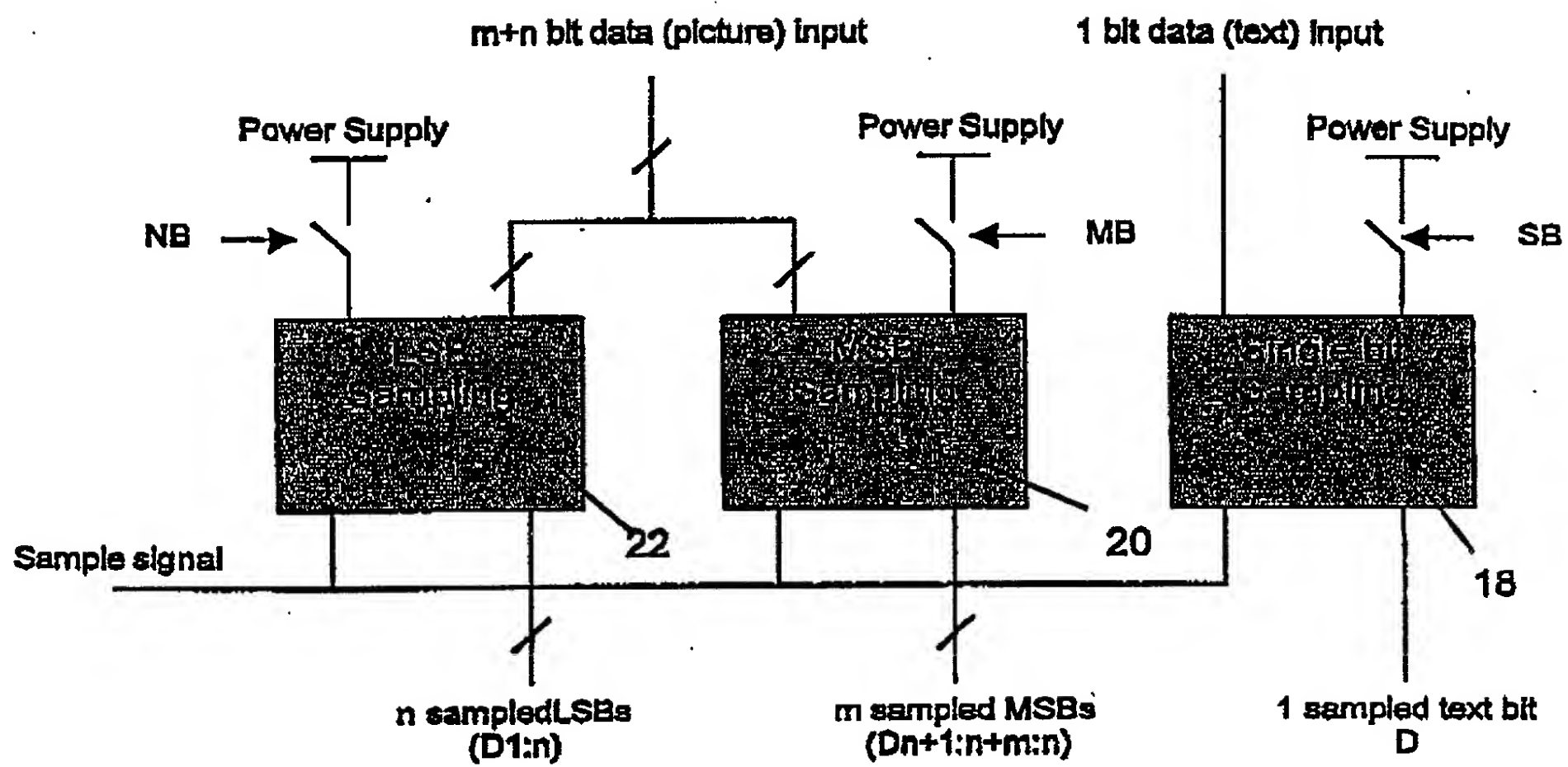


Figure 7: Power control within data sampling unit of multi-format driver

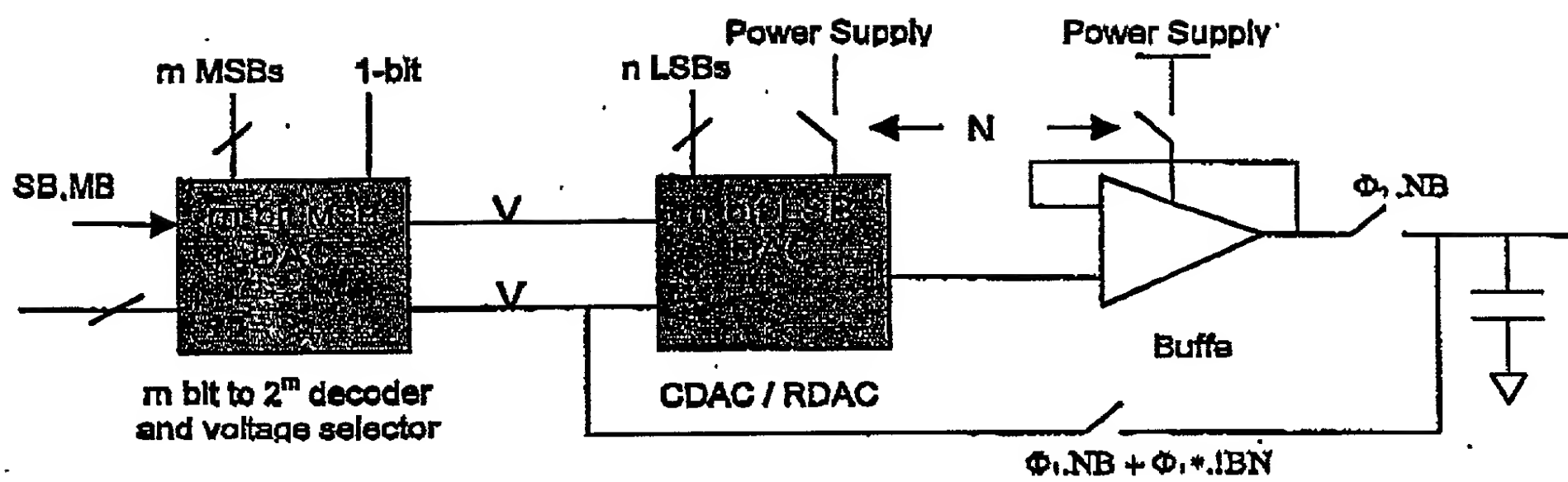


Figure 8 Variable resolution DAC with power control



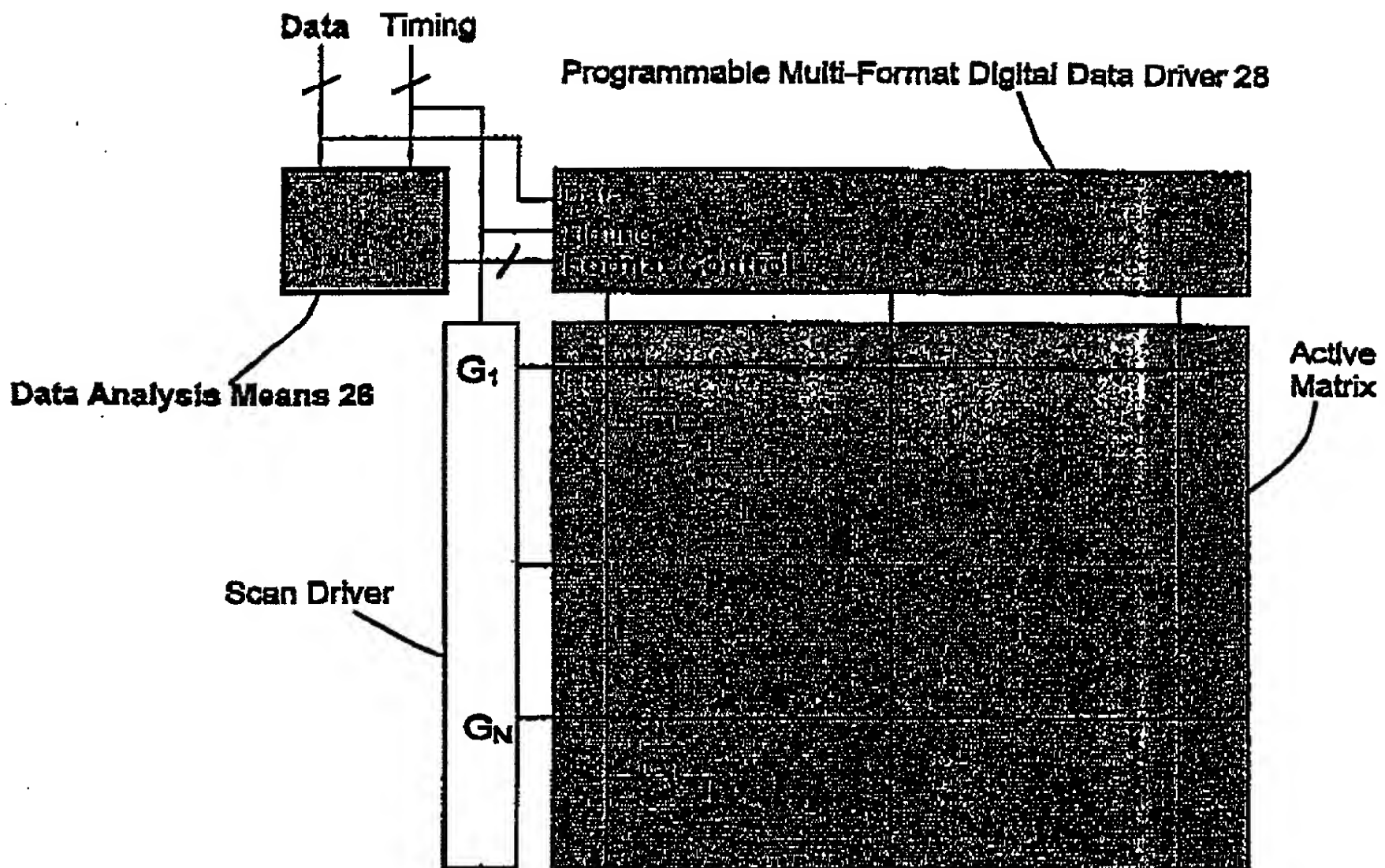


Figure 9 Basic embodiment of the invention – content driven format control

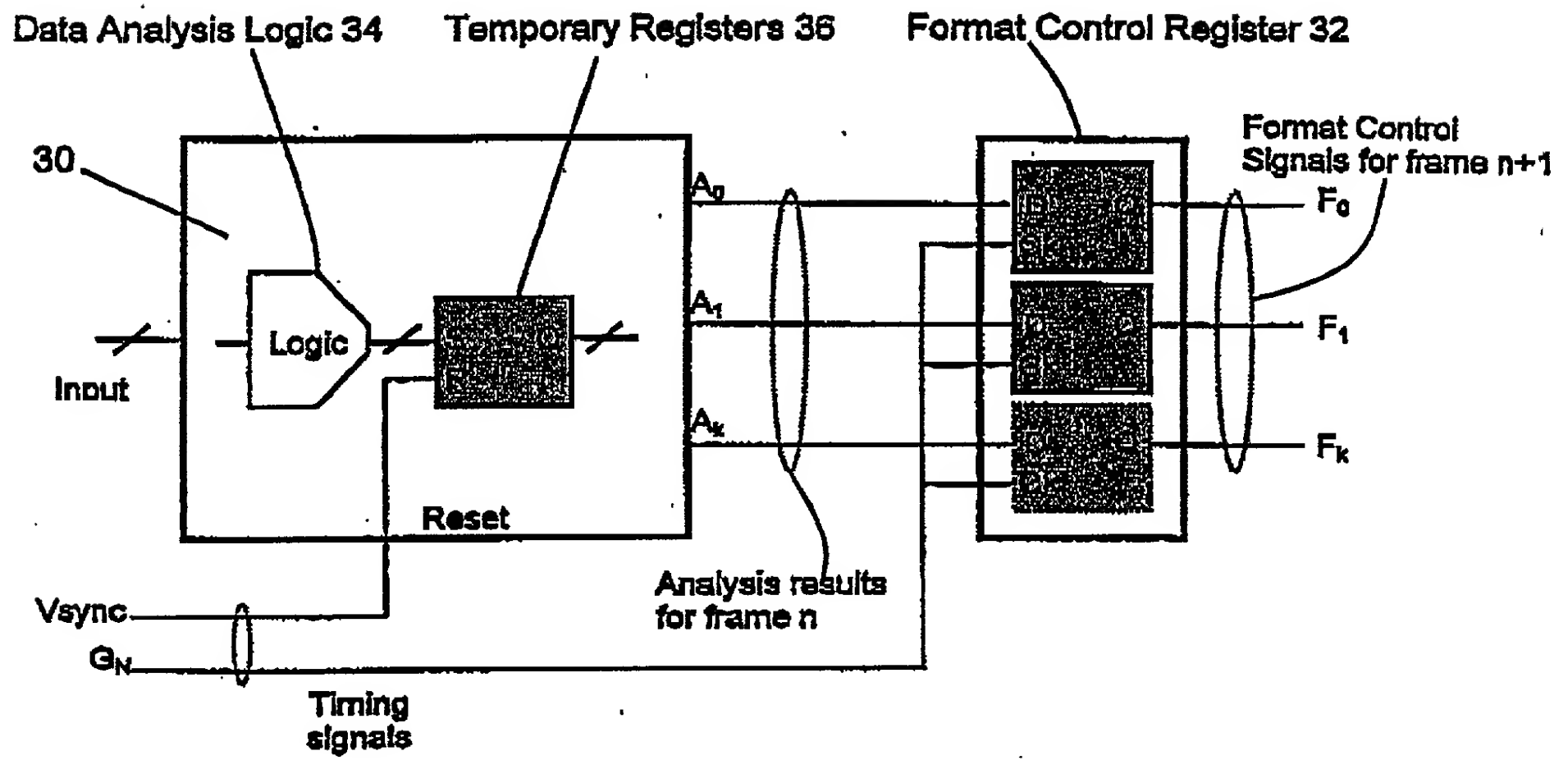


Figure 10 The functional blocks of the data analysis means

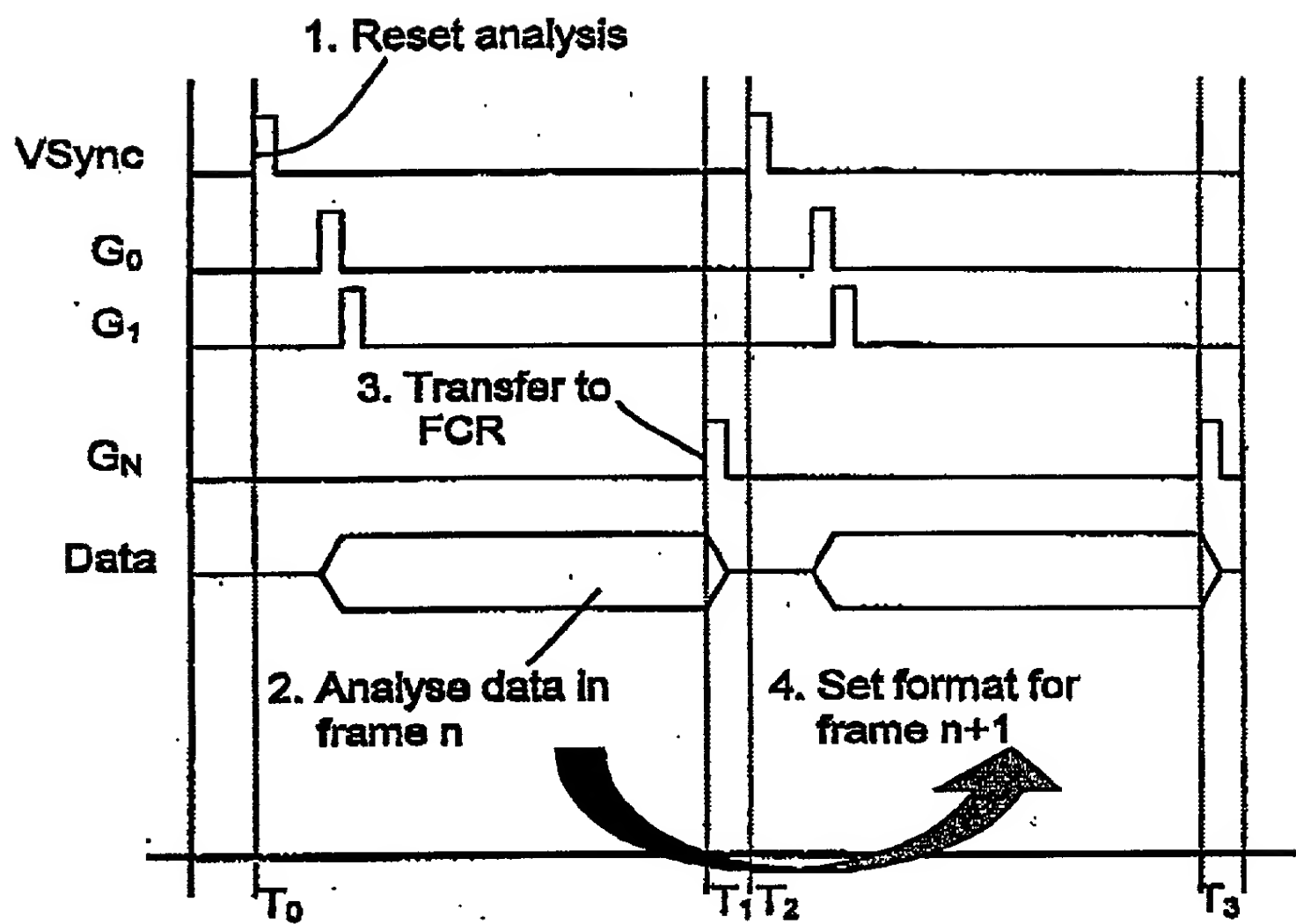


Figure 11 Generalised timing diagram for data analysis means

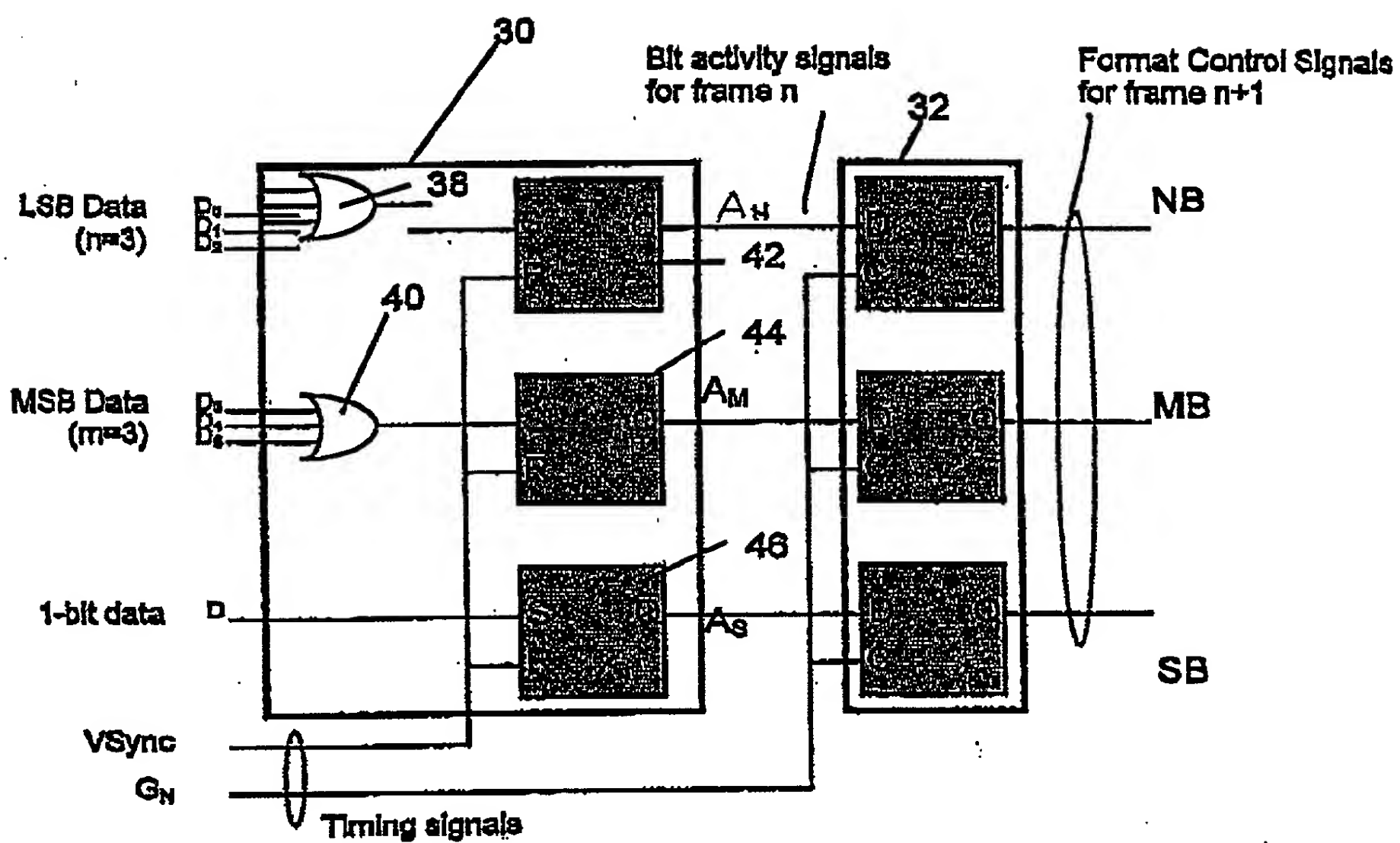


Figure 12 Embodiment of invention – generation of bit-resolution control signals

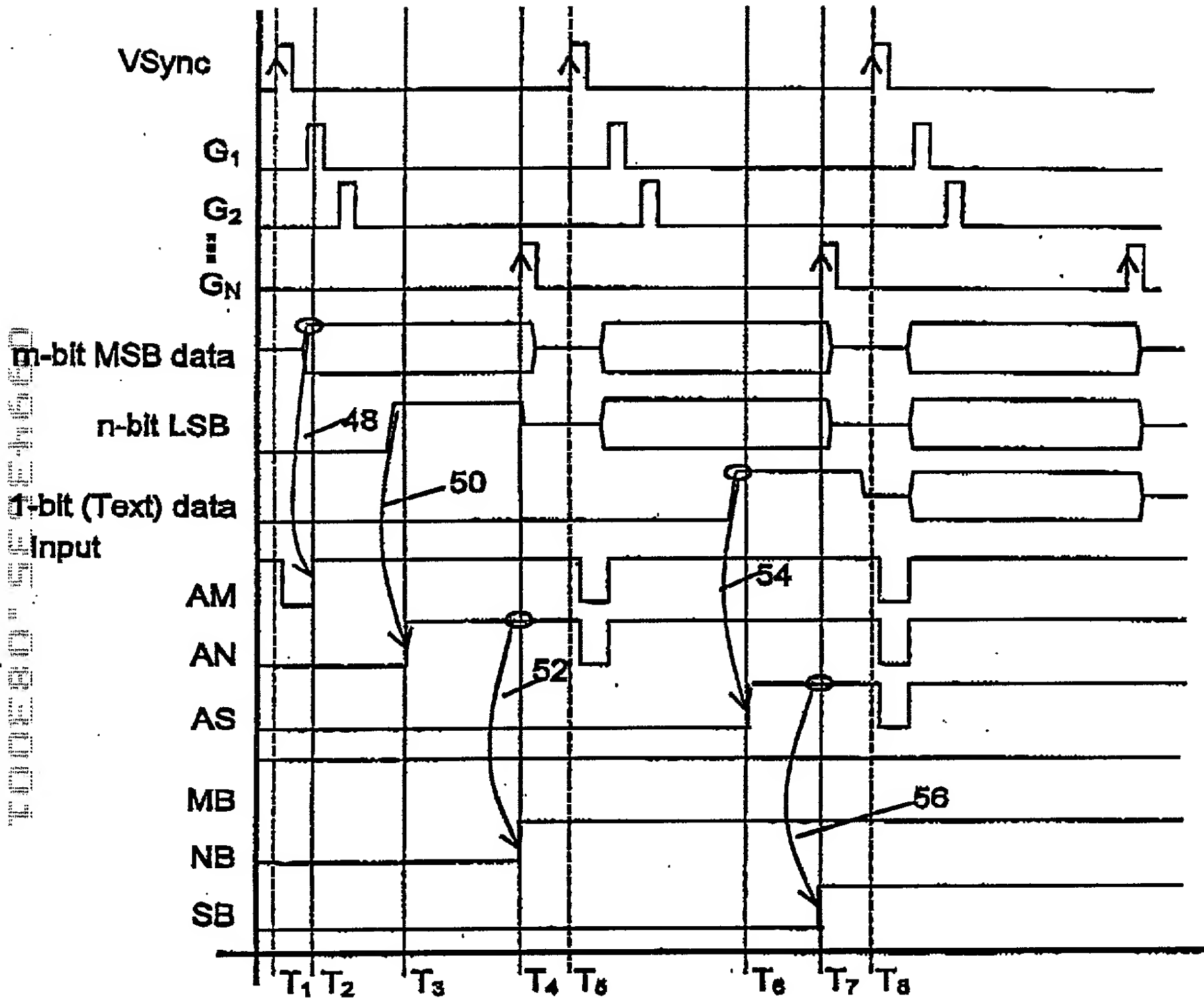


Figure 13: Timing diagram for bit-resolution embodiment



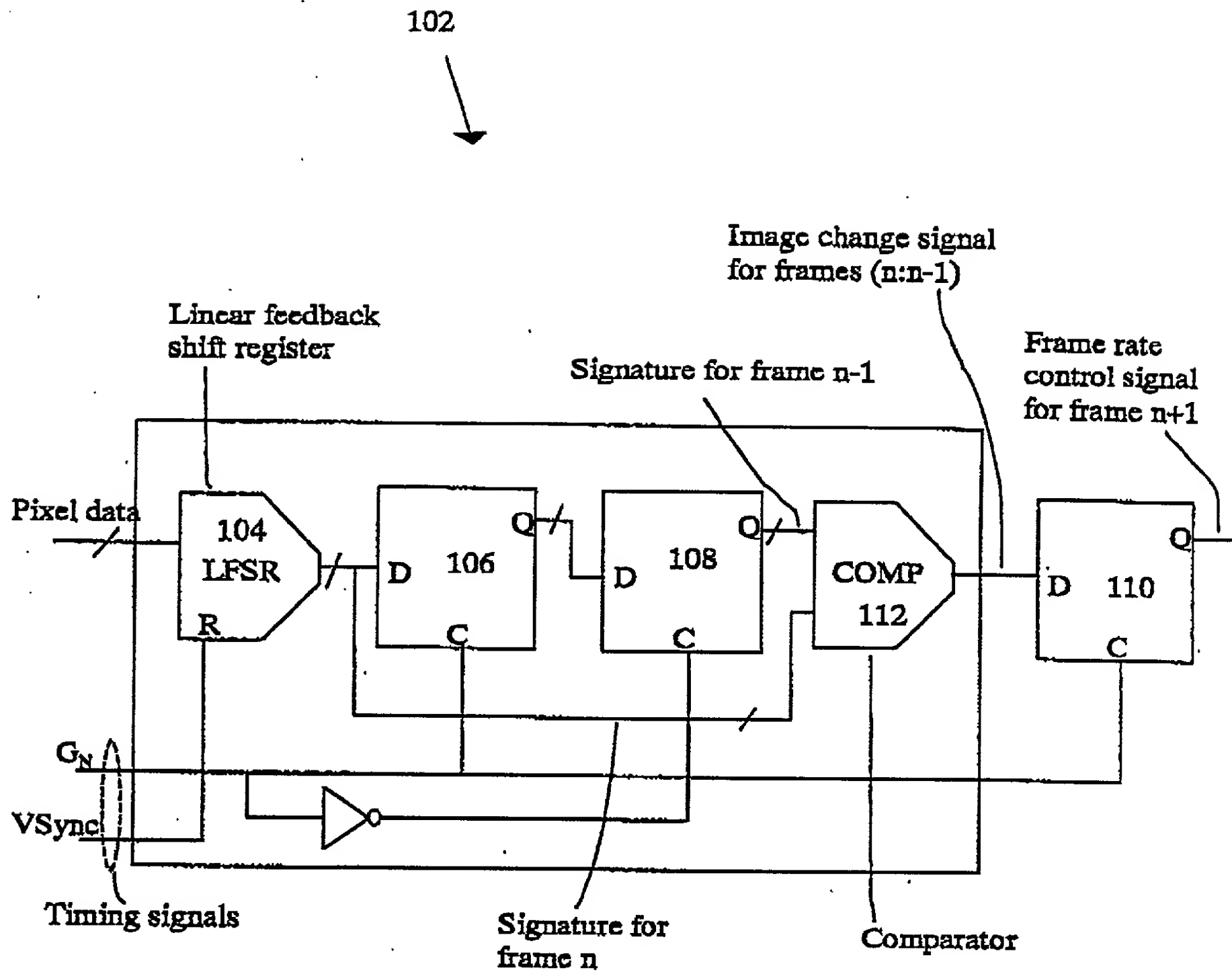


Figure 15

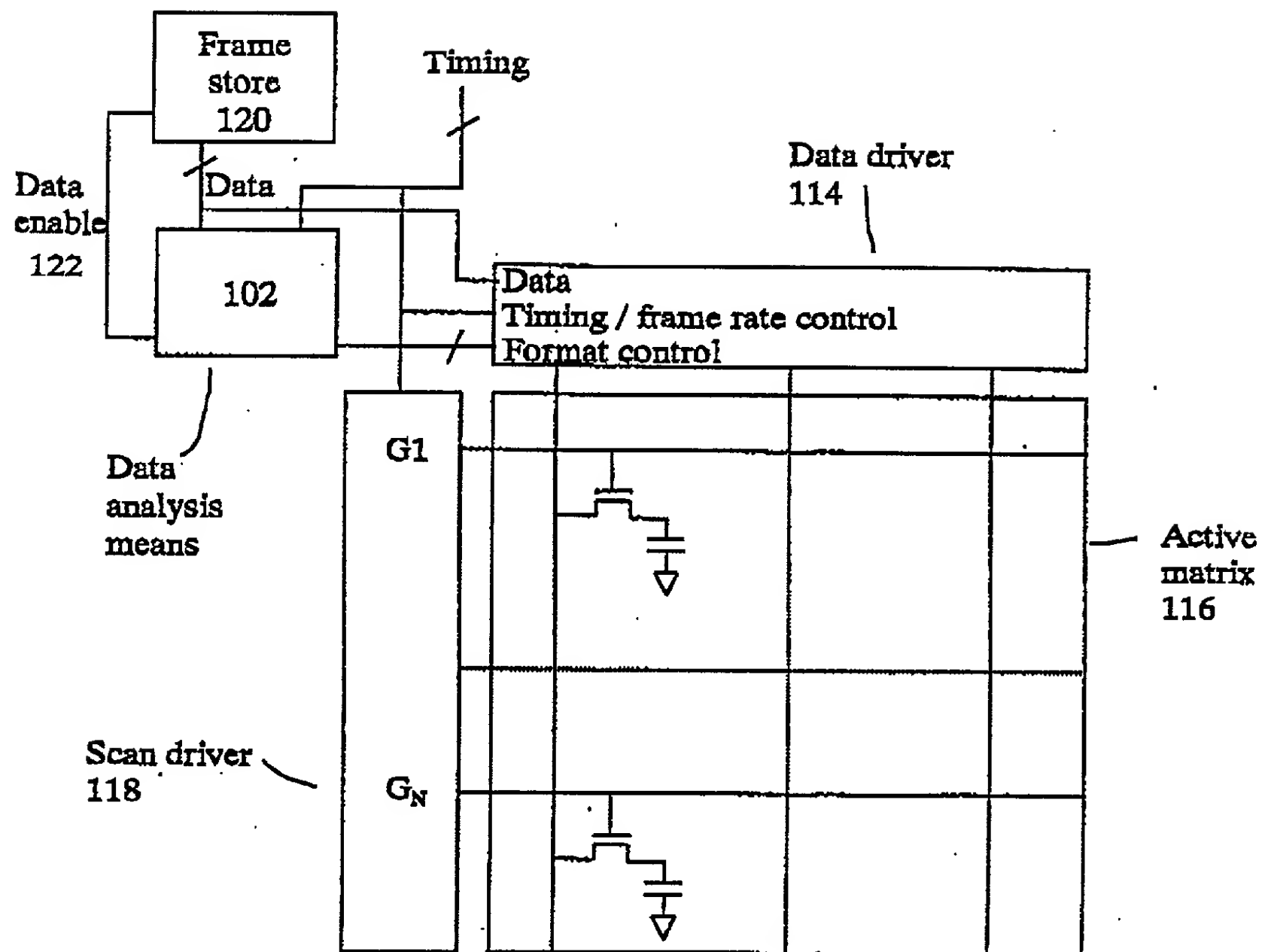


Figure 16



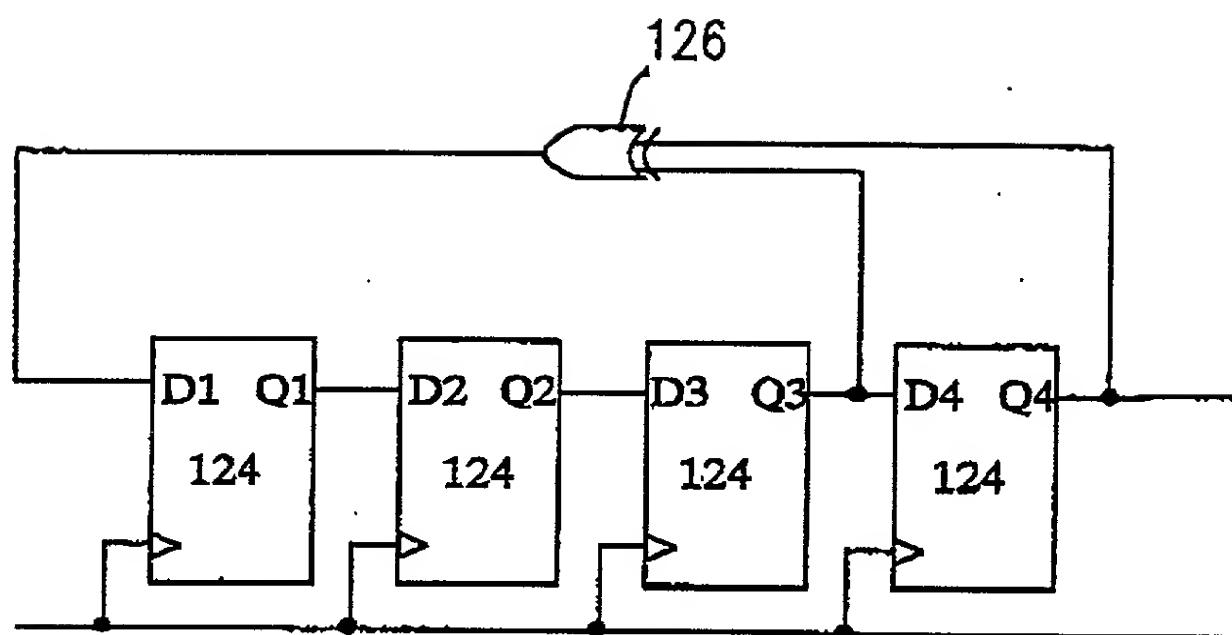


Figure 17

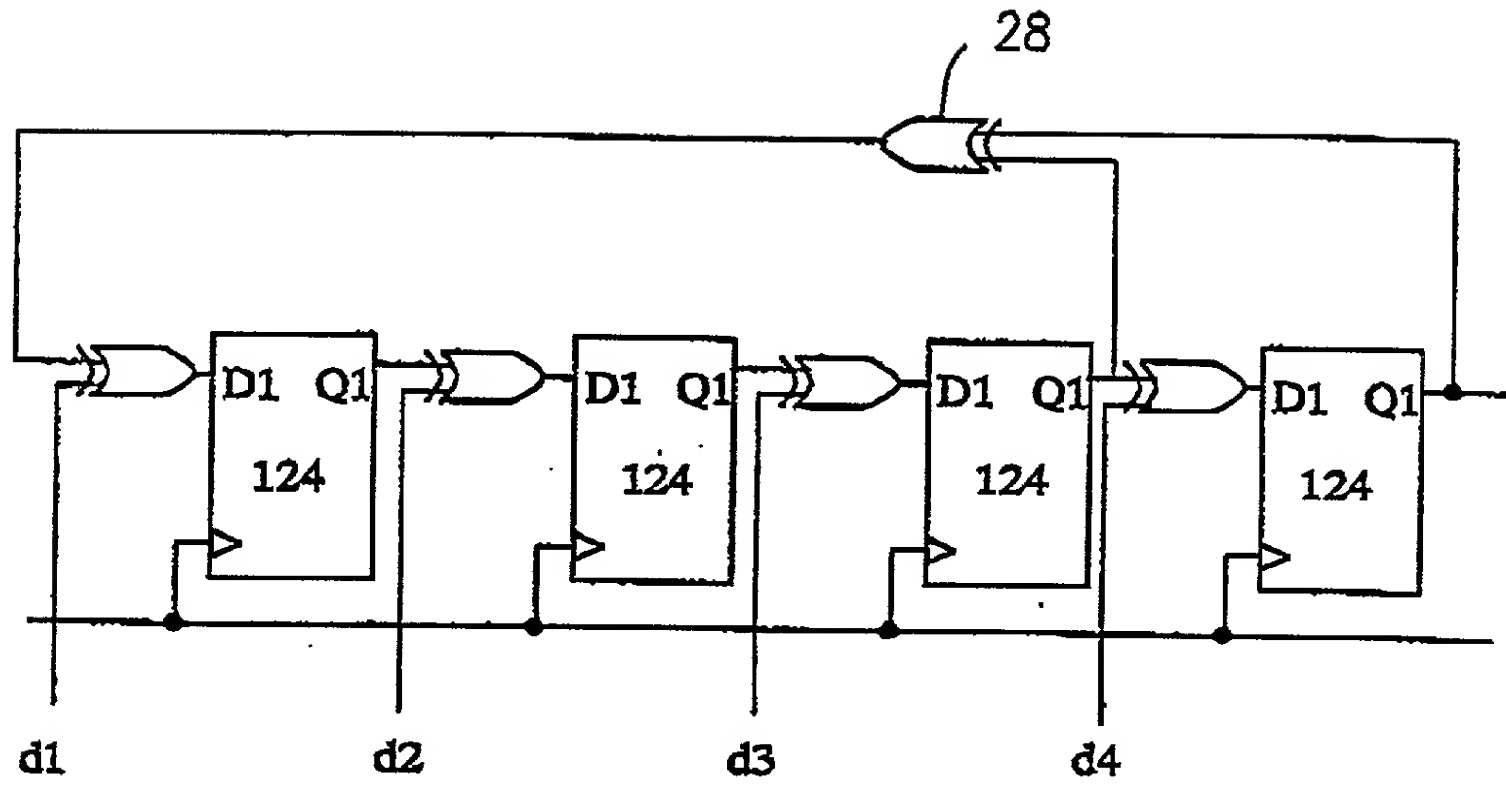


Figure 18

Figure 19

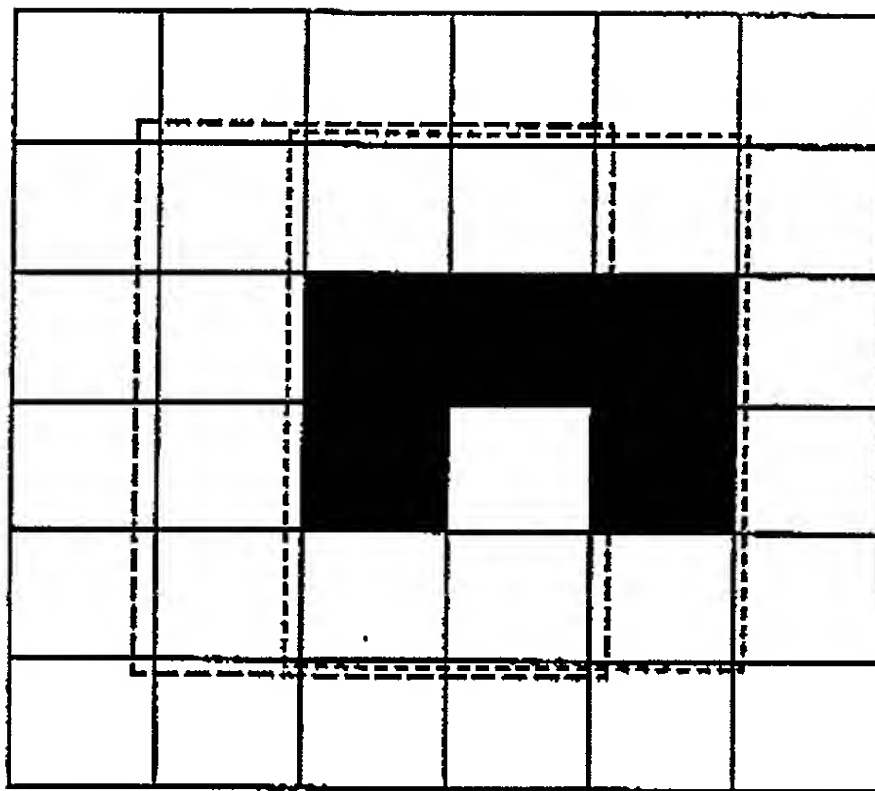


Figure 20

